

## Operating Instructions

### Colour Television

Model No.

**TC-21FX20 Series  
TC-29FX20 Series  
TC-29FX50 Series  
TX-21FX20 Series  
TX-21FX50 Series  
TX-29FX20 Series  
TX-29FX50 Series**

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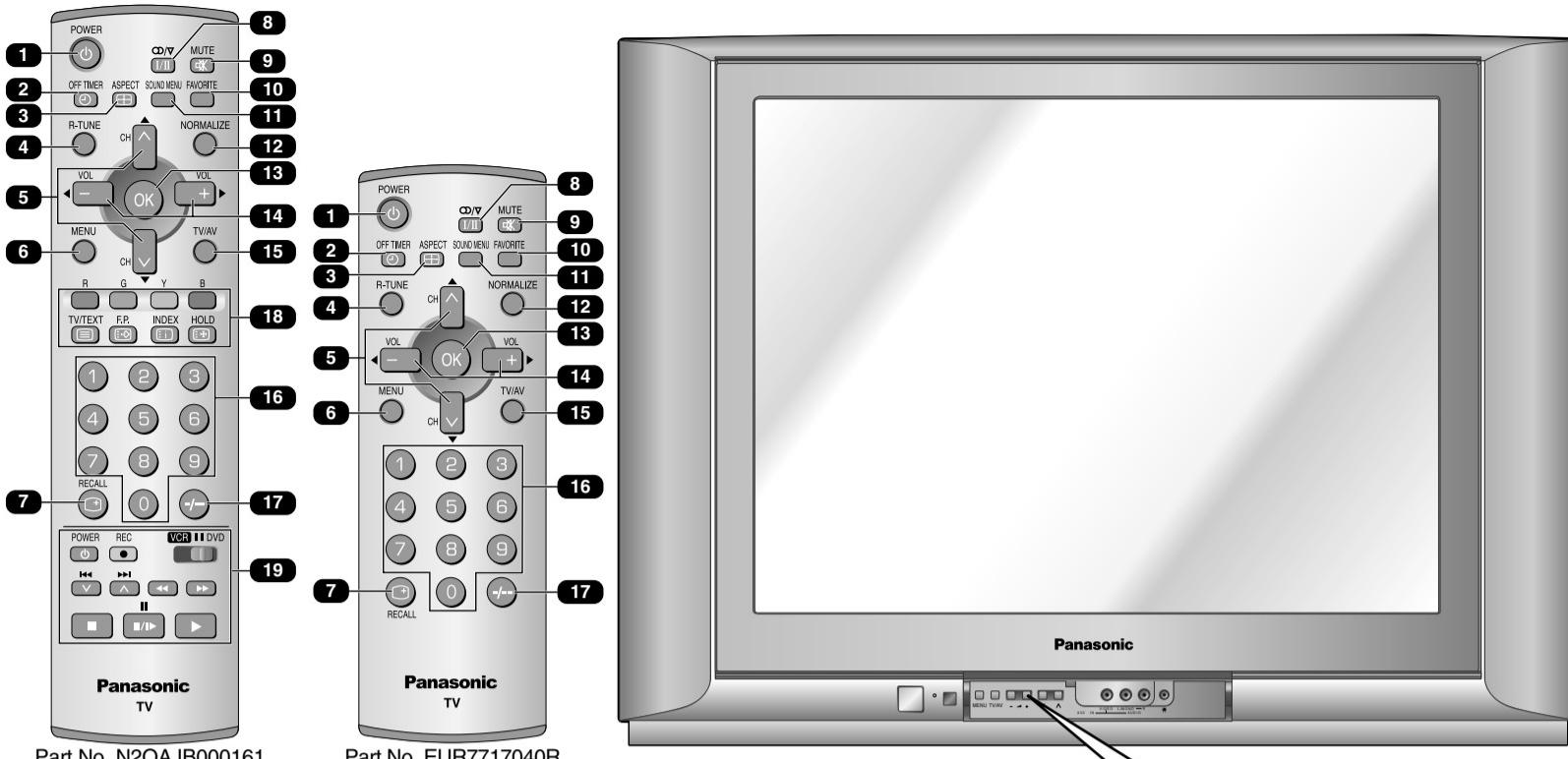
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TQB4G6097



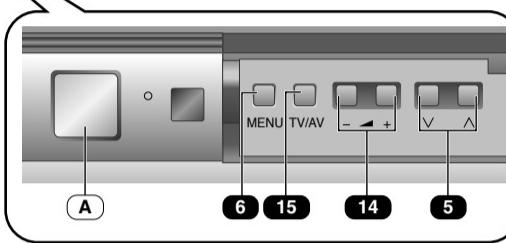
Part No. N2QAJB000161  
(For Teletext model)

Part No. EUR7717040R  
(For Non-Teletext model)

### Control Overview

- ① Main power on/off switch.  
The main switch is used as the disconnecting device.
- ② Standby/on switch.  
To switch the TV on from standby mode and vice versa.  
Power Indicator  
STANDBY – RED  
POWER ON – GREEN
- ③ Off Timer button. (See Setup menu)
- ④ Aspect button.  
To select Aspect mode: 4:3 or 16:9.
- ⑤ Rapid Tune button.  
To access previously viewed channel.
- ⑥ Programme Number “ $\wedge$ ” and “ $\vee$ ” buttons.
- ⑦ Menu button.
- ⑧ Recall button.  
To display the current system status. Press again to cancel.
- ⑨ Stereo/Bilingual Sound Selection button.  
(Not applicable for TC-21FX20 series, TX-21FX20 series, TC-29FX20 series and TX-29FX20 series. See Stereo/Bilingual Sound Selection.)

- ⑩ Mute button.  
To mute the sound. Press again to cancel.
- ⑪ Favorite button. (See Setup menu)
- ⑫ Sound Menu button.
- ⑬ Normalize button.  
To change selected functions in the Picture and Sound menus to Normal mode (factory preset condition).
- ⑭ OK button.  
To confirm selected option.
- ⑮ Volume “-” and “+” buttons.
- ⑯ TV/AV button.  
To select TV, AV1, AV2, or AV3 input signal mode.
- ⑰ Numeric (0 ~ 9) buttons.
- ⑱ Two-digit Programme Number Selection button.  
Hint: To select Programme Number 18, press ⑰, 1, ⑱.
- ⑲ Teletext operation buttons.
- ⑳ VCRs and DVD players operation buttons.  
(Not applicable for TC-21FX20 series, TC-29FX20 series and TC-29FX50 series.)



### Dear Panasonic customer

Welcome to the Panasonic family of customers. We hope that you will have many years of enjoyment from your new colour television.

Please read the operating instructions completely before operating this set.

### Troubleshooting

Before you call for service, determine the symptoms and make a few simple checks as shown below.

Symptoms		Checks
Picture	Sound	
		Aerial location, direction or connections
		Aerial location, direction or connections
		Electrical appliances Cars / Motorcycles Fluorescent lamps
		Volume (Check whether the mute function has been activated on the Remote Control.)
		Not plugged into AC outlet Not switched on Contrast and Brightness / Volume Setting (Check by pressing the Power Switch or Stand-by button on the Remote Control.)
		Colour control
		Retune channels
		Magnetic interference from unshielded equipment; TV set moved while "ON". Turn the TV set off for 30 minutes, using the Power Switch on the TV set.
		Sound System Colour System

### Specifications

Power Source	AC AUTO 110-240V, 50/60Hz (TC-21FX20M, TC-21FX20R, TC-29FX20M, TC-29FX20R, TC-29FX20U, TC-29FX20, TX-21FX50M, TX-29FX50M) / AC SINGLE 230-240V, 50Hz (TX-21FX50A, TX-29FX50A) / AC SINGLE 220V, 50Hz (TC-29FX50H) / AC SINGLE 220-240V, 50/60Hz (TX-21FX20R, TX-29FX20R)		
Power Consumption	67 W (21") / 98 W (29")		
Receiving System	17 Systems		
	SYSTEMS	FUNCTION	
	1 PAL B,G,H 2 PAL I 3 PAL D,K 4 SECAM B,G 5 SECAM D,K 6 SECAM K1 7 NTSC M (NTSC 3.58/4.5 MHz)	Reception of broadcast transmissions and playback from video cassette tape recorders.	
	8 NTSC 4.43 / 5.5 MHz 9 NTSC 4.43 / 6.0 MHz 10 NTSC 4.43 / 6.5 MHz 11 NTSC 3.58 / 5.5 MHz 12 NTSC 3.58 / 6.0 MHz 13 NTSC 3.58 / 6.5 MHz 14 SECAM I	Playback from special VCR only.	
	15 PAL 60Hz / 5.5 MHz 16 PAL 60Hz / 6.0 MHz 17 PAL 60Hz / 6.5 MHz	Playback from special Disc player and VCR only.	
Receiving Channels	VHF BAND 2-12 PAL/SECAM B,K1 0-12 PAL B (AUST.) 1-9 PAL B (N.Z.) 1-12 PAL/SECAM D 1-12 NTSC M (JAPAN) 2-13 NTSC M (U.S.A.)	UHF BAND 21-69 PAL G,H,I/ SECAM G,K,K1 28-69 PAL B (AUST.) 13-57 PAL D,K 13-62 NTSC M (JAPAN) 14-69 NTSC M (U.S.A.)	CATV S1-S20 (OSCAR) 1-125 (U.S.A. CATV) C13-C49 (JAPAN) S21-S41 (HYPER) Z1-Z37 (CHINA) 5A, 9A (AUST.)
Tuning System	Frequency synthesizer, Auto search tuning: 100 position		
Picture Tube	Viewable Picture tube measured diagonally: 50.5 cm (21") / 67.6 cm (29")		
Audio Output	8 W + 8 W = 16 W		
Aerial Impedance	75 $\Omega$ Unbalanced coaxial.		
Video/audio terminal:	DVD AV 1, 2, 3 Monitor Out	Y P <sub>B</sub> P <sub>R</sub> Video In Audio In Video Out Audio Out	1.0 Vp-p, 75 $\Omega$ 0.7 Vp-p, 75 $\Omega$ 0.7 Vp-p, 75 $\Omega$ 1 Vp-p, 75 $\Omega$ Approx. 0.5 V, 47 k $\Omega$ 1 Vp-p, 75 $\Omega$ Approx. 0.5 V, 1 k $\Omega$
Remote Control Transmitter	N2QAJB000161 (TX-21FX20R, TX-21FX50A, TX-21FX50M, TX-29FX20R, TX-29FX50A, TX-29FX50M) EUR7717040R (TC-21FX20M, TC-21FX20R, TC-29FX20M, TC-29FX20R, TC-29FX20U, TC-29FX50H)		
Battery	R6 (AA) x 2		
Dimension (WxDxH)	648 mm x 488 mm x 472 mm (21") 786 mm x 508 mm x 578 mm (29")		
Weight (Net)	24 kg (21") / 43 kg (29")		

Note: Design and Specifications are subject to change without notice. Weight and Dimensions shown are approximate.

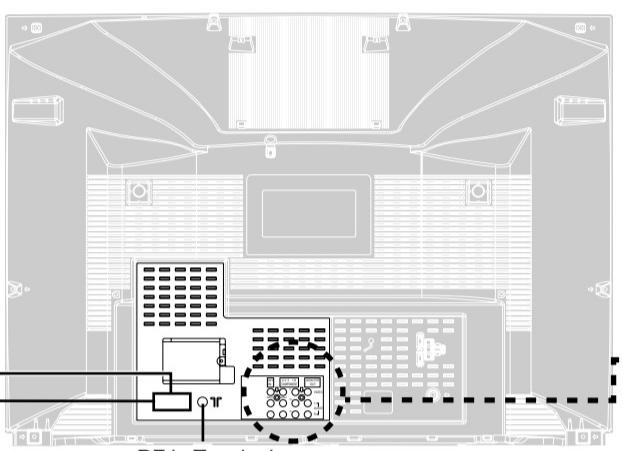
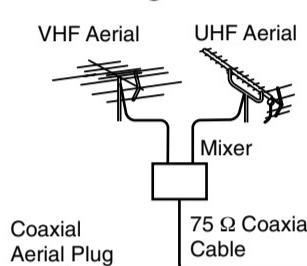
## Safety Instructions

	The TV set can be operated on AC AUTO 110-240V, 50/60Hz (TC-21FX20M, TC-21FX20R, TC-29FX20M, TC-29FX20R, TC-29FX20U, TX-21FX50M, TX-29FX50M), or AC SINGLE 230-240V, 50Hz (TX-21FX50A, TX-29FX50A), or AC SINGLE 220V, 50Hz (TC-29FX50H), or AC SINGLE 220-240V, 50/60Hz (TX-21FX20R, TX-29FX20R).		The cabinet and picture tube can be kept in good condition by simply wiping with a clean, soft cloth moistened with mild detergent and water. Do not use solutions containing benzol, petroleum or a chemical cloth. For safety, remove the plug from the wall outlet.
	The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.		Adequate ventilation is essential to prevent failure of electrical components, so we recommend a gap of at least 10 cm (↔) is left all around the unit when it is placed inside a cabinet or between shelves.
	Do not remove the rear cover, as live parts are accessible when it is removed.		Avoid exposing the TV set to direct sunlight and other source of heat.
	Remove the plug from the wall outlet (Power point) when the TV set is not used for a prolonged period of time. The main plug is used as the disconnecting device.		Do not use this set if abnormal operation occurs. Ex: smoke, odd sounds or smells, turn the power switch off and disconnect the AC power if you notice any unusual operation. Do not put the AC cord underneath your TV set or any other object.

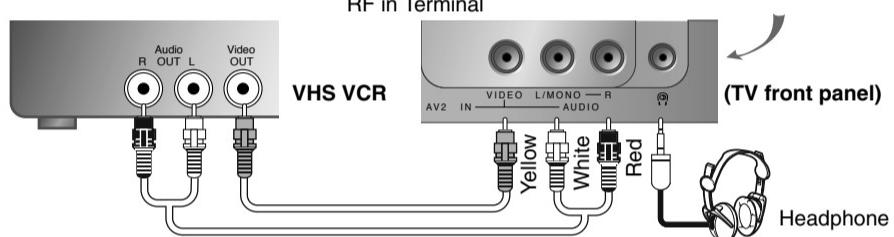
## Getting Started

### Connections

#### Connecting the aerial



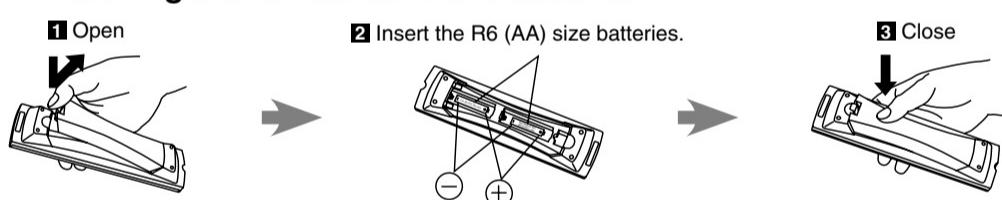
#### Connecting to the AV2 Input Terminals



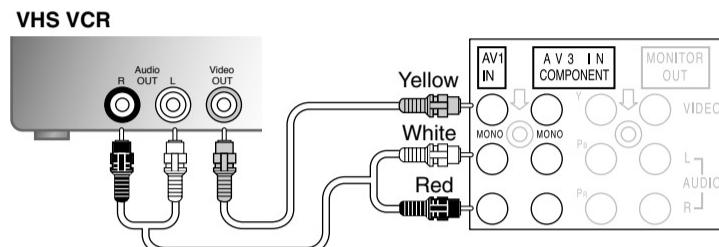
#### Notes

- When a Monaural VCR is used, connect the Monaural Audio cable to the Audio Out "L" (left) terminal.
- The AV3 audio input terminals serve as the audio input terminal for both the video input and for the DVD input.
- The DVD signal input terminal takes priority over the AV3 video signal input terminals.
- Never connect the same video recorder with both the VIDEO IN and MONITOR OUT terminals on this TV set, as this could cause incorrect operation.
- The DVD signal (Y-Pb-Pb) is not output at the MONITOR OUT terminals.

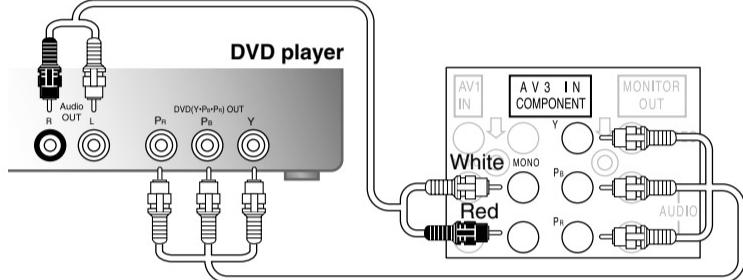
### Installing the remote control's batteries



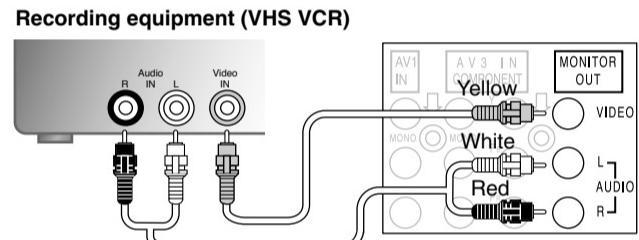
#### Connecting to the AV1 or AV3 Input Terminals



#### Connecting to the DVD Input Terminals

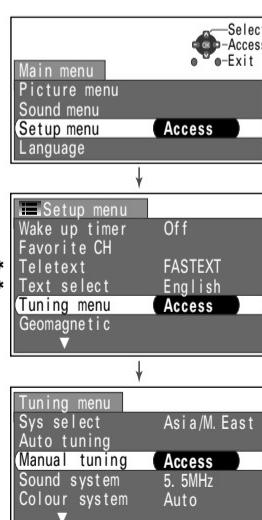


#### Connecting Other Equipment to the AV Monitor Output Terminals



## Tuning menu

1	2	3	4	5	6	7	8	
Access the Main menu.	Select Setup menu.	Access Setup menu.	Choose Tuning menu.	Access Tuning option.	Choose menu option.	Adjust/access chosen menu.	Exit the menu (press twice).	Return to normal TV screen.



Tuning menu	Description
Sys select (System select)	Select the system. → China → HK/UK → Asia/M.East → NZ/INDONES → Australia Japan ← CATV ← America ← SPECL Ver ← E.Europe ← <b>Note</b> You need to set the "Sys select" mode before carrying out Auto and Manual tuning.
Auto tuning	Allows you to automatically retune the TV. Useful if you move house and wish to retune your TV to the local stations. 1. Press the Volume “-” or “+” button to start Auto tuning. 2. Once this operation is completed, the TV will display the programmes now stored on programme position 1.
Manual tuning	Allows individual programme positions to be tuned manually. 1. Press the Volume “-” or “+” button to start Manual tuning. 2. Press the Programme Number “^” or “v”, Direct key 0-9 or -- (2 digit key) button to select the programme position to be tuned. 3. Press the Volume “-” or “+” button repeatedly until the required station is found. 4. Repeat the above steps to tune other programme positions.



Tuning menu	Description
Sound system	You can change the Sound system used for a programme channel. → 4.5 MHz ↔ 5.5 MHz ↔ 6.5 MHz ↔ 6.0 MHz ↔
Colour system	Lets you select the correct transmission standard. → Auto ↔ PAL ↔ SECAM ↔ NTSC 3.58 ↔ NTSC 4.43 ↔
Fine tuning	Use to make small adjustments to the tuning of an individual station.
Skip	To skip the undesired Programme Numbers from appearing on the screen. This function is only effective when selecting Programme Numbers by pressing the Programme Number “^” or “v” button. Skip mode can be switched on or off.
Ch Colour set	Variation in colour density between broadcast channels can be adjusted to three levels of each reception channel.

#### Note:

The set is pre-tuned for Australian Ch's 2, 7, 9, 10, 28, 31 and Auto tuning is NOT required.

\* Applicable for Teletext models only.

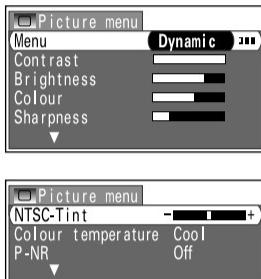
## To Watch TV Programme

<b>1</b> /	<b>2</b>  Or  e.g. To select programme number 18	<b>3</b> 	/
Turn the TV set on.	Select programme number. Two digit programme number selection.	Adjust volume.	To turn the TV set off.

## MENU Operation

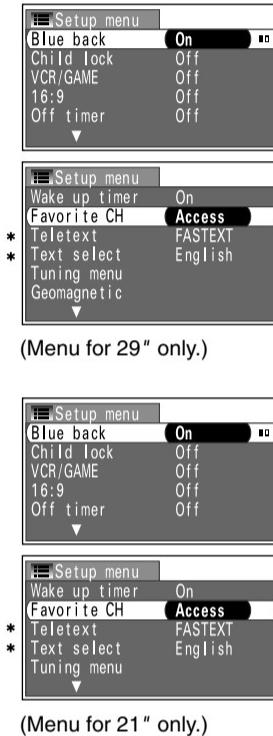
<b>1</b> 	<b>2</b> 	<b>3</b> 	<b>4</b> 	<b>5</b> 	<b>6</b> or
Access the Main menu.	Select menu.	Access menu.	Choose menu option.	Adjust/access chosen menu.	Exit the menu (press twice). Return to normal TV screen.

### ■ Picture menu



Picture menu	Description
<b>Menu</b>	<ul style="list-style-type: none"> <li>You can change the level of each Function (Colour, NTSC-Tint, Brightness, Contrast, and Sharpness) for each Picture menu.</li> <li>Each Picture menu setting will be memorized for TV, AV1, AV2 and AV3 modes individually.</li> </ul>
<b>Dynamic</b>	For viewing in brighter than normal environments. This menu selects higher than normal levels of Brightness and Contrast.
<b>Standard</b>	For viewing in normal (evening lighting) environments. This menu selects the normal levels of Brightness and Contrast.
<b>Cinema</b>	Ideal for movies. Can be selected for VIDEO/COMPONENT.
<b>Contrast</b>	Adjust the contrast.
<b>Brightness</b>	Adjust for easier viewing of dark pictures such as night scenes and hair.
<b>Colour</b>	Adjust slightly to a lighter colour.
<b>Sharpness</b>	Adjust the sharpness of the image.
<b>NTSC-Tint</b>	Adjust for proper skin colour. <b>Note</b> When the TV is receiving NTSC signals, NTSC-Tint is displayed and level adjustment is possible.
<b>Colour temperature</b>	Lets you set the overall colour tone of the picture. 
<b>P-NR (Picture Noise Reduction)</b>	Automatically reduces unwanted picture noise. 

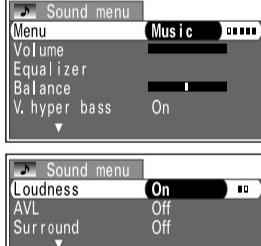
### ■ Setup menu



Setup menu	Description
<b>Blue back</b>	You can choose Blue back display On or Off when there is no signal.
<b>Child lock</b>	<ol style="list-style-type: none"> <li>When a channel is "Child Locked", the sound is muted and screen becomes blue.</li> <li>If any of the channels is "Child Locked", the Tuning menu selection buttons on the front panel will not function, and if the Volume "-" or "+" button on the front panel is pressed, the Child lock icon will blink.</li> <li>Turning on the main power in a Child Locked channel will display the Child lock icon on screen.</li> <li>Each channel has its own memory for channels to be Child Locked.</li> </ol>
<b>VCR/GAME</b>	Reproduction of irregular signals, such as certain TV games, rental video tapes and abnormal RF signal; may be improved.
<b>16:9</b>	When the 16:9 mode is On, the screen ratio becomes 16:9.
<b>Off timer</b>	Switches the TV off at a preset time which you can choose from between 0 to 90 minutes in 15 minutes intervals.
<b>Wake up timer</b>	<p>The Wake Up Timer can be set up to 12 hours.</p> <ol style="list-style-type: none"> <li>Press the Volume "-" or "+" button to select the timer option, each press will decrease or increase the timer by 10 minutes.</li> <li>Then, switch the TV to standby mode. The LED light will blink. If the TV is not switched to standby mode, the Wake Up Timer will still count down until it elapses.</li> <li>When the Wake Up Timer has elapsed, the TV will switch on automatically and the Off Timer will automatically be set to 90-minute. Press any button to cancel the Off Timer or the TV will switch to standby mode automatically after 90 minutes.</li> </ol> <p><b>To cancel the Wake Up Timer, choose any of the following:</b></p> <ul style="list-style-type: none"> <li>Switch off the main power.</li> <li>Access Wake up timer, then press the Volume "-" or "+" to select OFF.</li> <li>Access Wake up timer, then press the Normalize button.</li> </ul>
<b>Favorite CH</b>	<p>Favorite CH allows you to store up to 9 programmes in your preferred channel positions.</p> <ol style="list-style-type: none"> <li>Press the Volume "-" or "+" button to select "Favorite CH".</li> <li>Key in the Favorite CH number using the 0 ~ 9 buttons or Channel "▲" or "▼" button. Press the Volume "-" or "+" button to select the channel that you prefer. Repeat to set all 9 Favorite CH.</li> <li>After completed the setting, press the TV/AV button to return to the normal viewing condition.</li> <li>To activate the Favorite CH feature, press direct Favorite key on remote to "on" or press menu key during Favorite CH setting page is being displayed. Use Volume "-" or "+" to "on" the feature. Press channel "▲" or "▼" button to display the preferred channel that has been stored.</li> </ol> <p><b>Note</b> Channel "▲" or "▼" button can only work to view the Favorite CH page when this feature is set to On. Otherwise it will work as normal Channel "▲" or "▼" button. If the Favorite CH is set to On but the Favorite CH is not set, pressing the Channel "▲" or "▼" button will display the Favorite CH setting page and you can set the Favorite CH position that you prefer.</p> <p><b>To delete a channel from the Favorite CH list</b></p> <ol style="list-style-type: none"> <li>Access Favorite CH, then press the Volume "-" or "+" button to select the stored Programme Number that you wish to cancel and press the "Normalize" button.</li> <li>Press the "TV/AV" button to exit to normal TV screen.</li> </ol>
<b>*Teletext</b>	Allows you to change between List and FASTEXT modes.
<b>*Text select</b>	Selects character set, so that all the necessary characters are available for text on the teletext pages. Mode languages: English / CIS / E.Europe / Persian / Arabic.
<b>Tuning menu</b>	See front page.
<b>Geomagnetic (29" only)</b>	If you notice a slight tilt to the picture or if there are coloured patches at the corners of the screen, use this feature to eliminate them.

\* Applicable for Teletext models only.

### ■ Sound menu



Sound menu	Description
<b>Menu</b>	<ul style="list-style-type: none"> <li>You can change the level of each Function (Equalizer) for each Sound menu.</li> <li>Each Sound menu setting will be memorized for TV, AV1, AV2 and AV3 modes individually.</li> </ul>
<b>Music</b>	Recreates the acoustic feel of a live concert. Adds excitement to music videos, soundtracks and provides a powerful sound presence.
<b>News</b>	Enables spoken voice to be heard more clearly. Ideal for news, documentaries and talk shows.
<b>Cinema</b>	Recreates the cinematic sound effect from your TV. This setting provides clear and crisp dialogue.
<b>Sports</b>	The sound roars around from both sides of the TV, making you feel as if you are watching a live game.
<b>Personal</b>	Allows the setting of equalizer and balance to suit your personal taste.
<b>Volume</b>	Adjust the volume level.
<b>Equalizer</b>	Adjust the bass and treble effects for each Sound menu.
<b>Balance</b>	Adjust the balance of the left and right speakers.
<b>V. hyper bass</b>	Set V. hyper bass on or off.
<b>Loudness</b>	Set Loudness on or off.
<b>AVL</b>	Set AVL on or off.
<b>Surround</b>	Set Surround on or off.

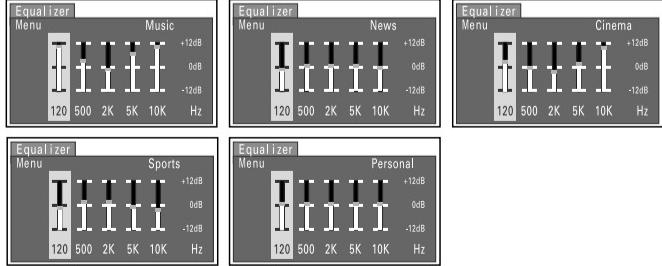
### ■ Language menu



Allows you to select your desired on-screen language.

### Adjusting the Equalizer

- While in the Sound menu, press the Programme Number "▲" or "▼" button until Equalizer is selected.
- Press the Volume "-" or "+" button to access Equalizer menu and to select each band of Equalizer.
- Press the Programme Number "▲" or "▼" button to adjust the level of each frequency band.



### Notes

- 120Hz and 500Hz : for bass adjustment (low frequency)
- 5KHz and 10KHz : for treble adjustment (high frequency)
- 2KHz : mid range

## Teletext Operation

(For TX-21FX20R, TX-21FX50A, TX-21FX50M, TX-29FX20R, TX-29FX50A, TX-29FX50M.)

• Teletext features may vary depending on the Broadcasting Companies and is only available if the channel selected is transmitting Teletext.

• While in the Teletext mode, pressing the Menu button will produce the following effects:

First Press: REVEAL (Red button) and F/T/B (Green button), Display Cancel (Yellow button), and TIME TEXT (Blue button).

	<b>TV/Teletext mode selection</b> Press repeatedly to change the TV/Teletext mode as follows: 
or	<b>Page Selection</b> Press to select your desired page.
	<b>Hold</b> Press to hold the current page. Press again to cancel the hold.
	<b>Index</b> Press to return to the main index page.
	<b>List mode</b> Press the coloured button that corresponds to the desired page number. Each of these numbers can be altered and stored in the TV's memory. <b>FASTEXT mode</b> Press the coloured button that corresponds to the desired subject. To access more information about the subjects, press the corresponding coloured button.

Second press: Contrast.

Third press: Normal Text.

- The Volume, Contrast and Fine Tuning adjustment can be done by using panel menu and Volume “-” or “+” buttons while in text mode.
- If the on-screen characters are illegible, select another Text Language.

	<b>Full/Top/Bottom</b> Press  to display special functions, followed by the <b>Green</b> button. Press the <b>Green</b> button again to expand the Top/Bottom half. Press again to return to normal (FULL) size.
	<b>Reveal</b> Press  to display special functions, followed by the <b>Red</b> button to reveal hidden words, e.g. quiz answer page. Press again to hide.
	<b>Display Cancel</b> Press  to display special functions, followed by the <b>Yellow</b> button to watch the normal TV programme. When the desired Sub-page is received, the page number will stop blinking. Press  to exit to the normal TV mode.
	<b>Notes</b> <ul style="list-style-type: none"> <li>This feature is to cancel the Teletext display and to exit the Display Cancel function.</li> <li>While in the Teletext mode, Position Up or Down button can change the Teletext page number.</li> </ul> <b>Favourite Page (F.P.)</b> Stores a Favourite Page in memory for instant recall. To store such a page, the TV must be in the List mode. Press the <b>Blue</b> button. Key-in the page number, then press and hold . To recall the stored page, press .

### Sub Coded Page Access

When teletext information exceeded one page, it may take some time to reach the sub page you required. It is possible to enter your required sub page and continue watching the TV programme until the correct sub page is found. If the top of the page indicates that the sub pages are being transmitted and yet the page does not change, then the number at the top of the page is there to indicate that the broadcaster has updated the page's contents and there are no sub pages.

	1. Press  followed by the <b>Blue</b> button to request the Time Text Page. T**** will be displayed. 2. Enter the desired sub page number before T**** disappears. Hint: To select page number 6, enter 0, 0, 0 and 6. 3. Press Display Cancel ( <b>Yellow</b> button) to watch the TV programme while waiting for the page to be loaded. The page number is blinking on the screen. 4. When the page is available, press Display Cancel ( <b>Yellow</b> button) again to view the sub page.
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## Remote Control Operation for VCRs and DVD Players

(For TX-21FX20R, TX-21FX50A, TX-21FX50M, TX-29FX20R, TX-29FX50A, TX-29FX50M.)

The remote control is capable of operating some functions of selected Panasonic VCRs and DVD (Digital Versatile Disc) players. Some VCRs and DVD players have different functions. So to ensure compatibility, please refer to the equipment's instruction book or consult your dealer for details.

<b>1</b> 	<b>2</b> 	Select VCR or DVD.	Press and hold.	Enter the manufacturer code.	Press to complete the setup.
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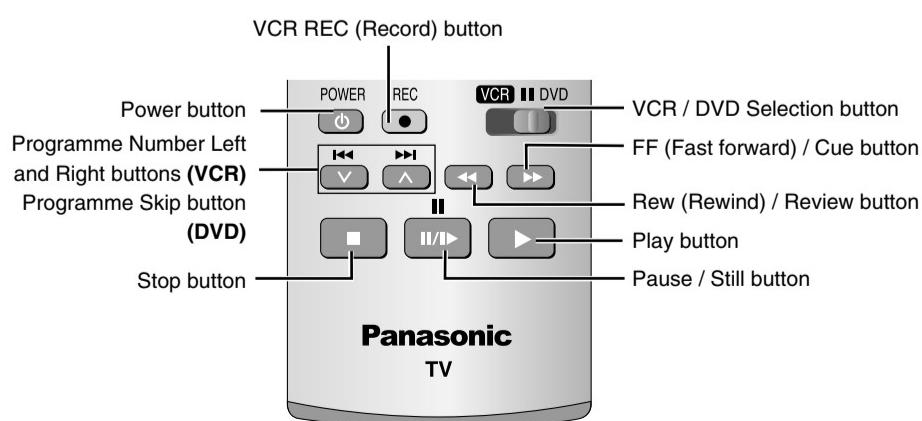
### VCR

Manufacturer	Code
National/Panasonic	10, 11, 12, 13

### Notes

- The respective VCR/DVD code is cancelled when the remote control's batteries are changed. You will need to set it again.
- Depending on the model, operation of VCRs or DVD players of the manufacturers listed above may not be possible. In some cases, new products may not be operative.
- The remote control will not operate with VCRs and DVD players of manufacturers other than the above listed.

### Button description for VCR and DVD player operation



## Stereo/Bilingual Sound Selection

(For TC-29FX50H, TX-21FX50A, TX-21FX50M, TX-29FX50A, TX-29FX50M.)

Allows you to select STEREO, BILINGUAL (if transmitted) or MONO sound output mode.

Audio Signal	Mode Indicator
STEREO	
MAIN I	
SUB II	
MONO	

Type of broadcast	Mode Indicator
NICAM	Regular broadcast (Standard Audio)
A2 (German)	
A2 (German)	Regular broadcast (Standard Audio)
BILINGUAL or DUAL MONO : MAIN I / SUB II	

### Notes

- The "A2 (German)" stereo/bilingual TV sound transmission system is used in the following countries; Australia, Malaysia, Thailand, Indonesia, etc. The "NICAM" stereo TV sound transmission system is used in the following countries; New Zealand, Singapore, Hong Kong, Thailand, China and Malaysia.
- If the stereo signal is poor or the receiving conditions are not optimum or if STEREO:MONO automatic switching occurs, it is recommended you switch from STEREO to MONO. When the broadcasting mode changes to "STEREO", or "MONO" after you have selected "MONO" mode, change over "STEREO" mode will be made automatically.
- Even when the contents of the receiving signal undergo changes, selection mode is kept intact.
- When the receiving conditions deteriorate, listening will be easier if the mode is set to the "MONO" position, using the stereo/bilingual sound selection button.
- "DUAL", also known as "DUAL MONO" or as "BILINGUAL" is not currently transmitted in some countries.